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# MULTIMEDIA UNIVERSITY

## FINAL EXAMINATION

TRIMESTER 1, 2016/2017

**TCC3141 – CLOUD COMPUTING**  
(All Sections / Groups)

12 OCTOBER 2016  
2.30 p.m. – 4.30 p.m.  
(2 Hours)

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### INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 3 printed pages including cover page with 5 questions only.
2. Attempt **ALL** questions. All questions carry equal marks and the distribution of marks for each question is given.
3. Please write all your answers in the Answer Booklet provided.

**Question 1 [10Marks]**

(a) Cost reduction is one of the business drivers for cloud computing adoption. List **TWO (2)** types of organizational costs that accounted for, when making decision for cloud adoption. [2 Marks]

(b) Differentiate between horizontal and vertical scaling in cloud computing environment. [8 Marks]

**Question 2 [10 Marks]**

(a) Explain the differences between SaaS, PaaS, and IaaS cloud delivery models with regards to the activities and typical level of control granted to cloud consumer. [6 Marks]

(b) Identify any **FOUR (4)** REST (Representational State Transfer) design constraints. [4 Marks]

**Question 3 [10 Marks]**

(a) Describe the virtualization attack in cloud computing. Draw a diagram to illustrate this attack. Propose **TWO (2)** potential solutions to overcome this threat. [4 Marks]

(b) State **TWO (2)** reasons for resource replication in cloud computing environment. [2 Marks]

(c) Explain the hypervisor mechanism used in resource replication. [4 Marks]

**Continued ...**

**Question 4 [10 Marks]**

(a) By using a flow diagram, demonstrate the processes involved in SLA management system in cloud computing environment. [6 marks]

(b) Describe any TWO (2) examples of resource pools. [4 Marks]

**Question 5 [10 Marks]**

(a) What is the purpose of live storage migration program used in storage maintenance window architecture. [2 Marks]

(b) Describe the Non-Disruptive Service Relocation Architecture. Provide a justification for the needs of this architecture. Use a diagram as example in your description. [8 Marks]

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